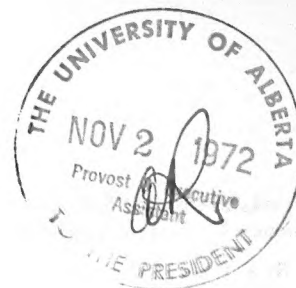


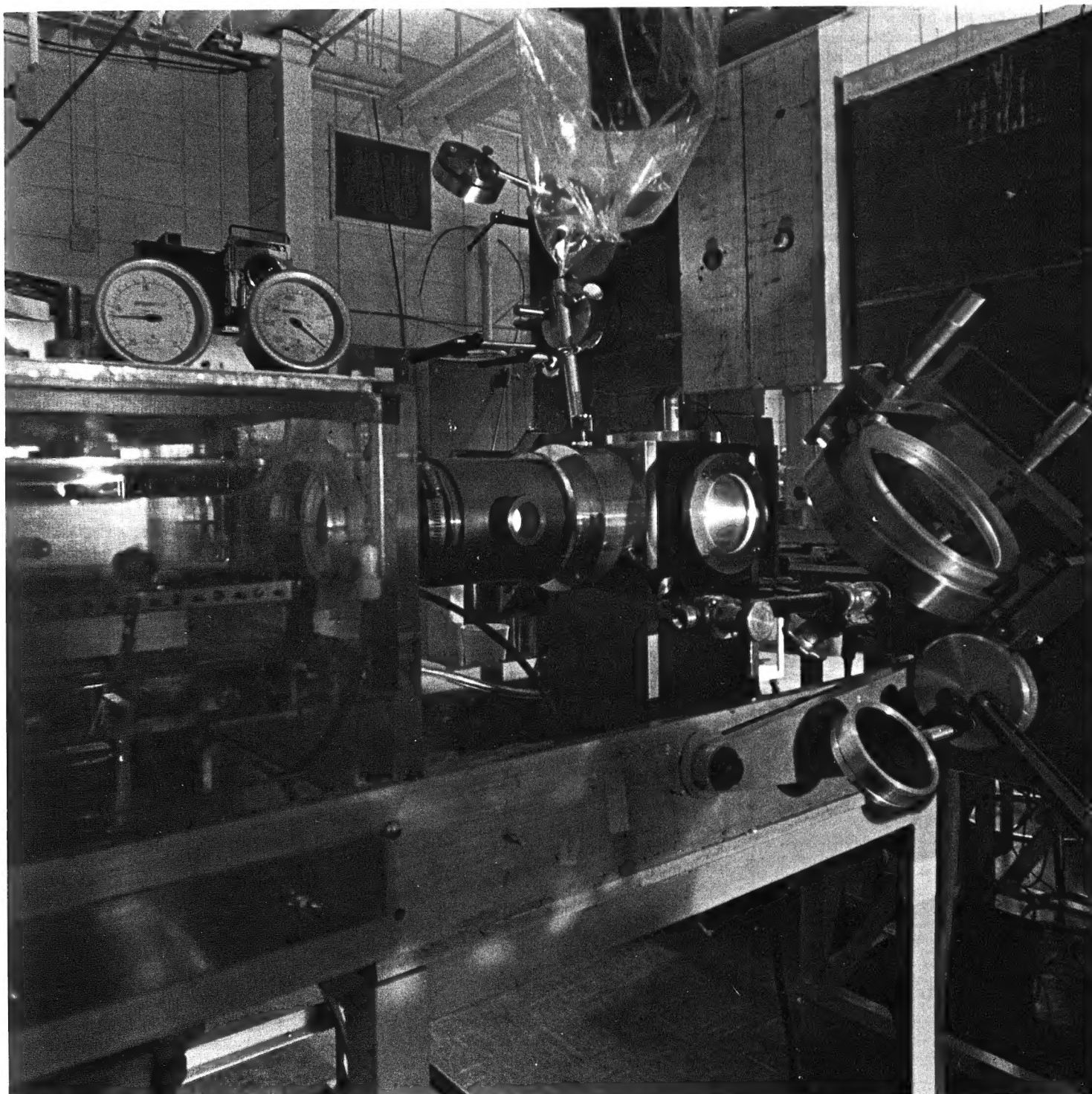
FOLIO



THE UNIVERSITY OF ALBERTA STAFF BULLETIN

EDMONTON, ALBERTA

NOVEMBER 2, 1972



VOLUME NINE, NUMBER EIGHTEEN

The pulsed CO₂ laser . . . see page two

LASER RESEARCH CONTINUES UNDER GRANT

By A. A. OFFENBERGER

Associate Professor of Electrical Engineering

Two areas of considerable research activity on this campus, currently supported by a National Research Council negotiated development grant, are laser and plasma technology. The two form a rewarding area for interdisciplinary research since each can contribute greatly to the understanding of the other. A variety of related topics on high power laser generation, fabrication of durable optics, and information processing in the laser area complement the work in generation, heating, and diagnostics of plasma. A major objective of the laser group is the development of high power devices suitable for industrial application such as metal fabrication. In addition, some of these developments have significance for thermonuclear plasma studies. Circuit breakers, because of their industrial importance, are also being studied in order to bring plasma technology to bear on a thorny practical problem in power transmission. Staff of the Department of Electrical Engineering involved in the research include: N. H. BURNETT, C. E. CAPJACK, C. R. JAMES, R. LAWSON, A. M. ROBINSON, H. G. SCHMIDT-WEINMAR, H. J. SEGUIN, P. R. SMY, A. STRILCHUK, J. TULIP, and me. Technical staff and graduate students are also involved.

It may be of interest to place research in these areas in perspective by choosing an example of current interest and concern—namely, the energy crisis.

Projected energy demands and resources point to a short lifetime for fossil fuels — coal, oil, and natural gas. Eventually nuclear fuels

will have to supply a major portion of mankind's needs; the question is whether nuclear fission (splitting of heavy atoms, e.g. uranium) or fusion (fusing of light atoms, e.g. hydrogen isotopes) is the better approach. Scientific feasibility, economics, ecological impact and, of course, politics are major components of such a decision.

Since fissionable uranium exists in limited quantities worldwide, breeder reactors (wherein fissionable fuel is produced as well as consumed) are necessary to meet energy demand from the large quantities of non-fissionable uranium and thorium in the earth's crust. However, scientific feasibility of both breeder reactors and thermonuclear fusion remain to be convincingly demonstrated. Nevertheless, a major decision within this decade will likely have to be taken to support one or another approach for commercial development.

Major advantages of fusion are inexhaustible reserves of hydrogen in ocean water, negligible explosion hazard for plant siting near population centres, small radioactive hazard compared to fission reactors, and potentially reduced thermal pollution. Given these incentives, researchers have been tackling the problems of producing, confining, and heating particles to energies necessary to initiate fusion of nuclei (at such high energies ordinary atoms are split into positively charged ions and electrons which is the "plasma" state of matter, as compared to solid, liquid, and gas states).

Though most worldwide activity is devoted to producing steady-state low particle density thermonuclear plasma, an alternative approach would be to initiate pulsed high density conditions using lasers. Theoretical predictions suggest sufficiently high power laser beams would be capable of repetitively triggering contained deuterium fusion "explosions" in a power reactor. Consequently, considerable activity is concerned with the problems of building such lasers and studying the interaction of laser radiation with plasma.

A major part of the research activity in lasers and plasmas in the Department of Electrical Engineering is concerned with these latter problems using CO₂ lasers in particular. Construction of high energy pulsed CO₂ lasers is a major concern for which an extremely useful version has been developed by the laser group in this department. This in turn has permitted novel investigations of plasma heating with very high intensity laser beams.

The cover photograph shows a laser of a type developed in the Department of Electrical Engineering. It is being used to study heating of plasma produced by gas breakdown at the focus of the intense laser beam.

VISITORS

DUILIO ARIGONI, Professor of Organic Chemistry at the Swiss Federal Institute of Technology in Zurich, was the guest lecturer at



the 1972 Reuben Benjamin Sandin Lecture Series held on campus this week. The series was established 11 years ago in honor of the outstanding scholarship and teaching of Dr. Sandin, who was first appointed to staff here in 1922 and became Professor Emeritus of Chemistry in 1964.

■ ZENON PYLYSHYN of the University of Western Ontario is visiting the Centre for Advanced Study in Theoretical Psychology. He will be on campus until the end of next week.

■ RONALD J. PRAZMARK, Vice-President of the Nanodata Corporation, Williamsville, New York, gave a colloquium and a seminar to the Department of Computing Science.

■ S. FOGUEL of Israel and Visiting Professor at the University of British Columbia, gave a colloquium to the Department of Mathematics.

PEOPLE

■ W. H. JOPLING has been appointed Acting Director of the Department of Radio and Television following the resignation of H. H. MAMET. Mr. Jopling continues as the Director of Technical Services.

■ REGULA QURESHI, graduate student in the Departments of Music and Anthropology, has been asked to contribute articles on Pakistani and Indo-Muslim music to the forthcoming edition of Grove's *Dictionary of Music and Musicians*.

■ F. C. ENGELMANN, Professor of Political Science and J. PETER MEEKISON, Chairman of that Department, attended a meeting of the board of directors of the Canadian Political Science Association held in Ottawa. While in Ontario, Professor Engelmann visited the University of Western Ontario as part of the CPSA manpower survey of PhD students which he is undertaking.

■ Five University of Alberta students have received scholarships from the Canadian Institute of Food Science and Technology, for achieving a high scholastic standing in the interdisciplinary food science program. They are: LORRAINE RAUHALA, Red Deer; ROBERT YEE, PATRICK MARCE and DONALD PARADIS, all of

FOLIO

THE UNIVERSITY OF ALBERTA, EDMONTON, ALBERTA

Published every Thursday for the staff and interested persons by the University Publications Office. Copyright 1972.

William Samis, Editor

FOLIO Policy Committee: E. D. Hodgson (Professor of Educational Administration), Frances Critchley Adam (Graduate Students' Association), J. W. Carmichael (Professor of Bacteriology), and Aylmer A. Ryan (Provost and Executive Assistant to the President)

Staff: Marcy McKissock (Assistant Editor), Jeanette Rothrock (Senior Writer), Forrest Bard (Photographer), Frank Hale (Illustrator), and Norma Gutteridge (Copy Editor)

Business Manager: A. S. Knowler (Chief Accountant, Office of Comptroller)

FOLIO OFFICE Telephone 432-4991
381 Central Academic Building, The University of Alberta

Printed by the Printing Department

Photographic lab work by Technical Services

Edmonton; and ELEANOR SMITH, Victoria, British Columbia.

■ DONALD C. FAIR, Associate Professor of Educational Psychology, has resigned effective June 30, 1973 so that he can devote more time to his practice as a clinical psychologist.

■ JOHN G. PATERSON, Professor of Educational Psychology, was recently a featured speaker at the Western Conference of the Canadian Psychiatric Association.

■ M. W. JACKSON, a graduate student in the Department of Political Science, published a short comment on comparisons of social and physical science in the last issue of *Science Forum*.

■ ALISON WHITE, Professor, and R. J. MERRETT, Assistant Professor, both of the Department of English, delivered papers at a meeting of the Samuel Johnson Society of the Northwest, held in Vancouver October 28.

■ R. C. W. HOOPER and NEIL HENRY of the Department of Student Affairs attended the Professional Advancement Seminar for Foreign Student Advisers held in Kitchener, Ontario, sponsored by the Canadian Bureau for International Education. The seminar was followed by an annual conference. At the annual general meeting, Major Hooper was elected to the Board of Directors for a two-year term.

■ T. H. PATCHING, Professor, and L. R. PLITT, Associate Professor, both of the Department of Mining and Metallurgy, attended the annual Western Meeting of the Canadian Institute of Mining and Metallurgy (CIM) in Saskatoon from October 23 to 26. Professor Patching is National Past-president and Professor Plitt is Past-chairman of the Northern Alberta Branch of CIM.

■ Two members of the Goliard Brass Quartet, which will be giving a concert for the Edmonton Musical Club on November 3, are members of the University staff. MALCOLM FORSYTH, Associate Professor of Music, plays the trombone. He is a former member of the Edmonton Symphony Orchestra and has recently returned from South Africa where he received his doctorate in music composition. DAVID OTTO, a research associate in the Office of Institutional Research and Planning, is a part-time tuba player with the Edmonton Symphony as well as with the Goliard Brass Quartet. Both Dr. Forsyth and Dr. Otto were founder members of the quartet.

■ VIOLET ARCHER, Professor of Music, attended the Conference of the Alberta Choral Directors' Association in Lethbridge, Alberta, where she directed a sight-reading session of her choral compositions. On October 24 her Sonata for Alto Saxophone and Piano was performed on the radio network of the CBC. The sonata was performed by EUGENE ROUSSEAU, saxophone, and WALLACE HORNIBROOK, piano.

■ Four undergraduate students in the Faculty of Medicine were named last week as winners of the Dr. Michael Emery Memorial Award, for papers they submitted at the fifth annual Student Research Day. They are: DAVID REID, MAN-KWONG KWOK, and MISS WENDY SISSONS and MARK BERNER (joint presentation). They will present their papers at the International Medical Student Research Meeting in Galveston, Texas early next year.

Honorable mention was given to: PHILIP TEAL and MISS DEBORAH ROY, EARL BOGOCH and WILLIAM SAUNDERS, and TOM BOWEN.

The papers were judged by ALVIN ZIPURSKY, Professor of Paediatrics at McMaster University, and CECIL COUVES and M. WATANABE, both professors at this University.

■ FLINT VOSS of Bioscience Animal Services attended the American Association for Laboratory Animal Science convention held October 16 to 21 in St. Louis, Missouri. Mr. Voss was named the Animal Technician of the Year in 1971 by the Ralston Purina Company who paid the expenses for his visit to St. Louis.

■ DAWN SUMNER of Bioscience Animal Services received the Teklad Speakers' Award at the Canadian Association for Laboratory Animal Science meetings held on this campus.

Miss Sumner's paper on the group breeding of hamsters was judged best of thirteen papers submitted by technicians from across Canada. She received an inscribed plaque and an honorarium of \$100 from the Teklad Company.

AMBASSADOR'S PRIZE IN AMERICAN HISTORY

The United States Embassy in Ottawa has announced that it will award a book prize to be known as "The Ambassador's Prize in American History" to the top student in 300 level courses in American History and to the top student in the 400 level courses in American History. An award of this nature has been given during each of the past three years through the request of the University's History Club. The United States Embassy has now arranged to make the award on a continuing basis. The University of Alberta was the first in Canada to have such a prize established by the U.S. Embassy in Ottawa and, of this date, Carleton University is the only other University to which such a prize is donated.

Isaac Beaver's forecast of a colder, snowier winter undoubtedly means different things to different people. To the skier, regular doses of new snow will provide a whole season of ideal skiing conditions. To the hitchhiker looking for a ride across Groat Bridge, the weather will only make his wait on 116 Street seem that much longer. But what about the student who hitchhikes to classes to save his bus fare for skiing?



NOTICES

BOARD MEETINGS

Dates for meetings of the Board of Governors in November were not announced in the MONTHLY CALENDAR because they had not been set when the calendar went to press. Meetings have now been fixed for 9 a.m. Friday, November 10 and 9 a.m. Friday, November 24.

AASUA MEETING

The Association of the Academic Staff of The University of Alberta will be holding a General Meeting on November 14 at 8 p.m., in room P26 of the Physics Building.

MISS, MRS., OR MS.?

At the October 12 meeting of the General Faculties Council Calendars Committee, members agreed that in addition to the designations "Miss" and "Mrs." which are generally used to identify the marital status of female staff members, the designation "Ms." will be recognized as a legitimate designation for those female staff members who prefer it.

Any questions regarding such entries in the calendars should be directed to the departmental chairman involved.

POSTERS AND SIGNS

The following notice has been received from R. C. W. HOOPER, Dean of Men.

As far as possible, posters and signs should be placed on the appropriate open notice boards which have been installed at convenient places in the major buildings on campus. Posting in the Students' Union Building must be done in accordance with Students' Union rules. The Residences have their own regulations. The Administration Building, University Hall, libraries and cafeterias are to be kept free of signs and posters.

For special events where a wider distribution of posters and signs may be desired, the following rules should be followed:

- (a) They must not be placed on painted surfaces, plastered walls, or woodwork;
- (b) On surfaces other than the above, masking tape may be used to affix the sign but the tape must be removed before it hardens;
- (c) Thumb tacks, staples, glue, rubber cement, or a permanent adhesive must not be used;
- (d) No signs may be tacked to trees;
- (e) Signs may not be placed on glass doors in such a way as to obstruct vision;
- (f) For signs or posters larger than 18"x24", the Dean of Men should be consulted;
- (g) Only a moderate number of signs or posters may be placed in any one location;
- (h) Persons or organizations are responsible

for seeing that their signs or posters are removed after the event;

- (i) For lettering on snow, the Grounds Department should be consulted about dyes non-toxic to plant life.

The maintenance staff have instructions to keep buildings free of signs which are not posted in accordance with these instructions. Damages resulting from such sign posting may be charged to the persons responsible. For further information, call the Building Superintendents.

PUBLIC LECTURE ON SOUTHERN AFRICA

DONOVAN WILLIAMS, Professor of History at The University of Calgary, will give a lecture entitled "Southern Africa 2000" at 7:30 p.m. on Monday, November 6, in the Henry Marshall Tory Building, Room T2-58.

Dr. Williams has been active in African higher education. Until 1959 he was Professor and Head of the Department of History at the University College of Fort Hare, South Africa. Before coming to Calgary he also taught at the University of Wales at Aberystwyth and at the University of Natal, Pietermaritzburg.

Dr. Williams holds doctorates from the Universities of Witwatersrand and Oxford, and has published a number of studies on South African and South Asian history. His lecture is open to everyone interested.

BOOKS AND RECORDS REQUIRED

Donations of used books and records are needed for a Used Book and Record Sale to be conducted by Canadian University Service Overseas (CUSO) during the week beginning November 6. Donations may be made to the Foreign Student Office, 2-5 University Hall or the information desk in the Students' Union Building. Pick-up may be arranged where delivery is impossible.

LAW REFORM: CONTRACTS AND CONVEYANCES WITH A COMMON PARTY

The following notice has been received from the Institute of Law Research and Reform.

Very often in today's business world it is commercially desirable for a partnership to contract with one of its members or with another partnership that has a common member. Examples are afforded by some joint ventures undertaken in the oil and gas industry.

The enforceability of these transactions is in doubt under the present law of Alberta. Doubt also exists about the validity of conveyances in like situations. The doubt arises from the fact that Alberta's law is based on the old English common law which said it was impossible for a person to make a promise to himself and to transfer land to himself. In modern business practice a person often wishes

to enter an agreement with himself and others or to transfer land to himself and others, but the old rules forbid even this.

In a report submitted to the Attorney-General last week, the Institute of Law Research and Reform recommends reform of the law pertaining to covenants and conveyances with a common party: "A should be able to make a contract with B; and A and B with B and C"; and, "Conveyances should be valid and effective according to their tenor whether made by A to A and B or by A and B to A or by A and B to B or C." The Institute would only permit a person to contract with himself alone where he is in fact in at least one capacity acting as agent for another.

A draft Common Parties (Contracts and Conveyances) Act incorporates these recommendations. The Institute considers it proper to give retroactive effect to the legislation since its purpose is to cure a harshness in the present law. Two complementary amendments to The Land Titles Act are also proposed.

For further information please telephone MRS. M. A. SHONE, Institute of Law Research and Reform, 402 Law Centre, 432-5291. Copies of the report entitled "Common promisor and promisee: conveyances with a common party" are available.

ADMINISTRATIVE DATA PROCESSING INSTALLATION CHANGES

In keeping with its major objective of the reduction of University administration costs, the Office of Administrative Data Processing (ADP) has replaced the IBM 360—model 40 data processing equipment with an IBM 370 — model 135. The rental for the 370/135 is somewhat less than that of the 360/40 and, in addition, the processing power or capacity for work of the new equipment is over twice that of its predecessor.

It is planned to put terminals on the 370 system, initially as replacements for keypunches, where they have an economic advantage. Consideration is also being given to the installation of terminals in ADP client areas. Again, such installation decisions will be based on economic justification as well as other benefits to be derived from having direct data entry/retrieval devices as an integral part of the record maintenance and reporting functions typical in administrative areas.

The 370/135 installation will be the first in Western Canada to go to the 370 Operating System (Virtual Storage). In other words, the 370/135 will be able to run programs normally requiring much more memory than the machine actually has. There is a similar facility on the Computing Services IBM 360/67 under the Michigan Terminal System. However, there is a significant difference between the two systems in that operational programs and systems

required no changes to allow them to take advantage of the new facility.

A summary of the services offered on the new machine is being prepared and copies may be obtained by calling 432-4572.

EDUCATIONAL PSYCHOLOGIST TO SPEAK IN EDMONTON

F. M. HEWETT, a pioneer in the development of special education teaching techniques for exceptional children, will speak to University of Alberta professors next week.

Dr. Hewett is scheduled to address the Special Education Conference at 9 a.m. Saturday, November 4, in the Eldorado Room of the Macdonald Hotel. The conference is sponsored by the Faculty of Education and the Alberta Teachers' Association.

EXTENSION MANAGEMENT COURSE

The Gellerman film series "Motivation and productivity" will be used to provide the latest concepts in leadership and motivation during a three-day seminar on Management of Human Assets to be held November 16 through 18.

The seminar, offered by the Department of Extension, will be conducted by RAY V. RASMUSSEN, Associate Professor of Business Administration and Commerce. It is designed for middle and upper level managers who have responsibility for establishing and maintaining a high level of motivation in their organizations, and, in addition, will focus on the difficulties of changing over to different organizational structures and leadership styles.

Registrations are now being accepted at the Department. The fee is \$75. Class hours are from 9 a.m. to 4:30 p.m. Additional information may be obtained by telephoning 432-5061, or 432-3116 after 4:30 p.m.

THIS WEEK AND NEXT

Listings must reach the Editor by 9 a.m. the Friday prior to publication. Written notification is preferred. Compiled by NORMA GUTTERIDGE, 432-4991.

2 NOVEMBER, THURSDAY

Public Lecture

3 p.m. "Poverty among recent migrants to the American city" by RICHARD PEET of Clark University, and editor of *Antipode: A Radical Journal of Geography*. Sponsored by the Department of Geography. Henry Marshall Tory Building, Room 3-104.

Film Night

8 p.m. Program on two Canadian film makers: NORMAN JEWISON and NORMAN MC LAREN. Students' Union Building, Room at the Top. Admission free.

3 NOVEMBER, FRIDAY

Student Cinema

6:30 and 9 p.m. *The Gang That Couldn't Shoot Straight*, a satire on organized crime. Students' Union Theatre. Admission: students 50 cents in advance, general public \$1 at the door.

Faculty Club

Downstairs. TGIF—Dishes of Northern India. Menu by Dr. and Mrs. Gupta. Murgh-buyani (chicken) Anda-koma (egg) Kasta-kach. \$3.25.

Meeta Television Series on English Literature

7:30 p.m. "Fantastic worlds in children's literature" by MURIEL WHITAKER, Assistant Professor of English. Channel 11.

Edmonton Musical Club

8:30 p.m. The Goliard Brass Quartet: ED NIXON, trumpet; BILL DIMMER, trumpet; GLORIA JOHNSON, horn; MALCOLM FORSYTH, trombone; DAVID OTTO, tuba. Convocation Hall.

4 NOVEMBER, SATURDAY

Saturday Forum

10 a.m. "Jurisprudence and the Christian: law and love" by P. G. C. KETCHUM, LLB (Cantab). Henry Marshall Tory Building, Room 14-6.

Faculty Club

Downstairs. Casual dining in the Saskatchewan Room. A new feature for frosty days—the Faculty Club Soup Tureen: a sturdy boullabaisse or aromatic French onion. Crêpes filled to choice, or cheese and fruit. \$3.
Upstairs. Regular dinner menu. Dining 6 to 10 p.m., dancing 9 p.m. until midnight.

5 NOVEMBER, SUNDAY

Student Cinema

6:30 and 9 p.m. *THX 1138*. In the tradition of "Brave New World" and "1984" this film paints a terrifying picture of the future. Students' Union Theatre. Admission: students 50 cents in advance, general public \$1 at the door.

6 NOVEMBER, MONDAY

World Adventure Tours

6:10 and 8:50 p.m. *Vienna, Salsberg, Tyrol*, narrated by JOHN ROBERTS. Features the Imperial Palace, the Vienna Choir Boys, the Lippizaner Horse Show and Esterhazy Palace. Jubilee Auditorium. Tickets from Celebrity Box Office, 422-4801.

Public Lecture

7:30 p.m. "Southern Africa 2000" by DONOVAN WILLIAMS, Professor of History at The University of Calgary. Henry Marshall Tory Building, Room T2-58. (See "Notices," page 4 for further details.)

National Film Theatre/Edmonton Film Society

8 p.m. The films of Louis Bunuel — *Tristana* (Spain 1970) with Catherine Deneuve, Fernando Rey, Franco Nero. Spanish with English sub-titles. *La Voie Lactée/The Milky Way* (France 1968). French with English sub-titles. Joint presentation to be held at the Students' Union Theatre. Admission: NFT members \$1, a limited number of guests at \$2.50. EFS members with International series tickets admitted free.

Friends of Organ Music

8:30 p.m. Organ recital by GILLIAN WEIR of London, England. All Saints' Cathedral, 103 Street near Jasper Avenue. Tickets at the door \$3, students and senior citizens \$1.50.

7 NOVEMBER, TUESDAY

Continuing Medical Education Course

7:30 p.m. "Diabetes management" a panel discussion. Clinical Sciences Building, Room 2-115.

Boreal Circle

8 p.m. "Arctic pipeline — with the environment in mind" by D. J. ROWE, Senior Engineer, Canadian Arctic Gas Study Ltd., Calgary. Biological Sciences Building, 4th floor cafeteria, centre wing. Memberships: \$2 per person, \$3.50 per family, 50 cents per meeting. Seven meetings October through April. Meter parking at Windsor Carpark, enter from 116 Street.

MEETA Series 'What Do You Think?'

8:30 p.m. Discussion about the "new" Senate. FIL FRASER, MRS. RITA CALHOUN, and BILL THORSELL, Executive Officer of the Senate. Channel 11.

Operatic Concert

8:30 p.m. Students of the Voice/Opera Division of the Department of Music present a concert of staged operatic excerpts. Directed by ROWLAND HOLT-WILSON and ALFRED STROMBERGS. Convocation Hall. Admission free.

8 NOVEMBER, WEDNESDAY

Edmonton Film Society

7 p.m. *Throne of Blood* directed by Akira Kurosawa. Japanese Series. Henry Marshall Tory Building, TL-11.

MEETA Television Special Documentary

8 p.m. First one-hour segment of *Africa!*, winner of 13 awards. It presents a multi-dimensional examination of the customs, history, and future of the people and countries of the "dark continent." Narrated by Gregory Peck. Channel 11.

9 NOVEMBER, THURSDAY

Library Seminar on Research Resources

12 noon. *And 10 November, Friday*. "Government publications in the social sciences; problems in developing and exploiting

the collection" by W. HYRAK, Documents Librarian. Cameron Library, penthouse.

Concert

8 p.m. *And 10 November*. "Sing Out Edmonton." Tickets from members, and from Mike's 429-0848. Jubilee Auditorium.

10 NOVEMBER, FRIDAY

Faculty Club

Downstairs. TGIF — Pub and Games Night. Veal and ham pie, pork pie, cole slaw, roly-poly pudding. \$2.

MEETA Series on English Literature

7:30 p.m. IAN HAMILTON FINDLAY, modern Scottish poet and a leading exponent of concrete poetry, takes a guided tour through examples of his work with host STEPHEN SCOBIE, Assistant Professor of English. Channel 11.

Student Cinema

6:30 and 9 p.m. *The Anderson Tapes* with Sean Connery. The story of a multi-million dollar robbery masterminded by a criminal genius. Students' Union Theatre. Admission: students 50 cents in advance, general public \$1 at the door.

Edmonton Theosophical Society

8 p.m. "Fundamental Theosophy" by GEOFFREY FARTHING from London, England. A question period will follow. The meeting is open to the public and a collection will be taken. Henry Marshall Tory Building, Room LB2.

Basket Ball

8:30 p.m. *And 11 November, Saturday*. Golden Bears vs. Great Falls, Montana. Main gymnasium.

Concert

8:30 p.m. The St. Cecilia Orchestra and Concert Choir of the Department of Music in a performance of works by Clarke, Schubert, and Handel. Conductor: MICHAEL BOWIE; Chorus Master: DAVID STOCKER. Convocation Hall, Admission free.

11 NOVEMBER, SATURDAY

Football

2 p.m. Golden Bears vs. the University of Saskatchewan (Saskatoon). Varsity Stadium.

Faculty Club

Downstairs. Casual dining in the Saskatchewan Room — Soup Tureen. Choice of won ton or black bean with ham, French bread. Crêpes or cheese and fruit.

Upstairs. Regular dinner menu. Dining 6 to 10 p.m., dancing 9 p.m. until midnight. (The club will be closed on November 13 for the Remembrance Day holiday).

Edmonton Symphony

8:30 p.m. *And 12 November, Sunday at 2:30 p.m.* Conductor: LAWRENCE LEONARD; Guest Artist: ANTON KUERTI, pianist. Leonore

Overture No. 3, Beethoven; Symphony No. 4 in D Minor, Schumann; Piano Concerto No. 1, Tchaikovsky. Jubilee Auditorium.

EXHIBITIONS AND PLAYS

University Art Gallery and Museum

6 to 30 November. "Andre Kertesz: Photographs".

Edmonton Art Gallery

Until 5 November. "Goodridge Roberts." From the collection of Dr. and Mrs. Max Stern. *Until 5 November*. "Nine incredible toys by artists." Toys as art, commissioned by Bonnier International Design and being shown in travelling exhibitions at over 100 other galleries throughout the world.

Studio Theatre

Until 4 November. Genet's *The Balcony*, directed by JOHN TERFLOTH, Professor of Drama. Tickets on sale at the box office in Corbett Hall, 112 Street and 82 Avenue. University students admitted free with ID card. Season subscriptions still available, telephone 433-3265.

PERSONAL NOTICES

Notices must be received by 9 a.m. the Friday prior to publication. Rate is seven cents per word for the first insertion and five cents per word for subsequent insertions ordered with the first. Minimum charge is \$1. To avoid billing, notices MUST BE PAID IN ADVANCE. For assistance or order blanks, telephone Mrs. Adrienne Lent, 432-4991.

Accommodation available

FOR RENT—Belgravia, near campus, spacious four-bedroom bungalow. 18 December to 15 August. 436-0727.

FOR RENT—Small house opposite University. One bedroom main floor, two bedrooms in basement. Furnished. Available November 7 to June 1. \$140/month. Call 436-2666.

FOR RENT—Meadowlark, luxury three-bedroom apartment. Colored appliances, broadloom throughout. Balcony. One and one-half baths. Free laundry and parking, quiet. 15020 87 Avenue. 433-8916.

FOR RENT—Four-bedroom house, Lynnwood, fully furnished, 1½ bathrooms. Available December 1 for six months. \$250/month. Telephone 432-5690, 489-0312 evenings.

FOR RENT—Riverbend, four-bedroom home, furnished, all appliances, family room with fireplace. January 1 to June 30. \$240/month. 434-8949 or 432-3743.

FOR SALE—St. Albert, condominium townhouse. Three bedrooms, extra bedroom downstairs, 1½ baths, shag carpet in livingroom, five appliances, large kitchen, utilities room. Balcony/sundeck overlooking wooded ravine much frequented by bluejays and chickadees. Family room has glass doors to patio lawn and ravine. \$23,500. Phone Don Smythe, 455-9191, evenings 455-9705.

FOR SALE—Home, Windsor Park, Edinboro Road; two storeys, four bedrooms, two fireplaces, separate beamed dining room. Extra large lot, mature trees. Phone 439-2948.

Accommodation wanted

WANTED TO RENT—At reasonable rate, furnished two- or more bedroom house or suite for period December to May, for faculty member, wife and child. Contact V. Korkie, 6101 N.E. Radford Drive, Seattle, Washington, 98115, U.S.A.

Automobiles and accessories

FOR SALE—Chevelle owners — Four snow tires F.78/14. Belted, studded, mounted on 14" Chevelle wheels, balanced. Used one winter, city driving only. \$25 each, \$90 the set. Days 432-4915.

FOR SALE—Two Atlas Weather Gard snow tires, 4-ply, 6:45-14, blackwall. Used two months. Excellent condition, firm, \$40 pair. Randy, 432-3890.

FOR SALE—1970 VW Beetle, deluxe, gas heater, snow tires. 599-3768 after 6 p.m.

FOR SALE—1970 Cougar, 3-speed stick, excellent condition, \$2,595. 1967 Parisienne, \$1,100. Hardtop for 1967 MGB. \$150. Phone 439-8354, 469-0150.

FOR SALE—1965 Rambler, clean car, \$500. 434-8949.

FOR SALE—Winter tires, C-78-14 (8-25-14) 4-ply nylon, used one winter (Chevrolet station). \$20 both. 436-5178.

FOR SALE—1969 Volvo 142S, 31,000, tuned, winterized, \$2,000. 433-2717.

Goods and services

REQUIRED—Babysitter 11:30 to 4:30 in her home for 3½ year old boy. Call 436-5325.

FOR SALE—Blue sheer fiberglass drapes with linings. Phone 424-1503 after 6 for details.

FOR SALE—Teak Hi-boy (five drawers), \$70; teak round coffee table, \$25; Tyrolean safety ski bindings, \$25. All like new. 433-9004.

YOU WILL LOVE Parkview flea market, 9135 146 Street. Enjoy visiting, discovering Christmas ideas, quality antiques, fun, collectables, spicy baking, smiles. See you Sunday, November 5, 12-5 p.m.

FOR SALE—Nutri-metrics cosmetics. Call Irene, 432-5684, 439-2406.

WILL TYPE—Experienced typist will type term papers, essays, etc.. Reasonable rates. Mrs. E. Munro, 479-2459.

DRESSMAKING AND ALTERATIONS—By experienced seamstress. Telephone 433-2351.

OPERA—Two or three tickets required for Friday, Nov. 17, in exchange for two or three tickets (first balcony, Centre F), for Monday, Nov. 20. Contact 433-8645 (evenings) or leave message at 432-4926 (days).

LOST—Sterling silver Parker Jotter. Students' Union or Faculty Club? on October 3. Phone 432-3361. Reward.

POSITIONS VACANT

NON-ACADEMIC STAFF

Applicants are sought for the following positions. The Personnel Office (Room 121, Administration Building) will provide further details to interested persons, who are asked not to approach the departments directly.

Clerk Typist I - II (\$302-\$423)—Faculty of Arts Publications Clerk I (\$331-\$423)—Publications Office Clerk Steno II (\$348-\$444)—Psychology Bacteriology Technologist I (\$513-\$759)—Provincial Laboratory
Biology Technologist I (\$566-\$722)—Genetics Biochemical Technician (\$489-\$624)—Pathology Technologist (\$566-\$722)—Agricultural Engineering Storeman II (\$423-\$539)—Dentistry Audio & Video Technician I (\$513-\$655)—Industrial & Vocational Education Technician (Open)—Microbiology